

Remarks

Claims 1-40, 44 and 45 are pending.

Claims 1 and 44 are independent.

Claims 12-34 stand withdrawn as being drawn to a non-elected invention.

Claims 1-11, 35-40, 44 and 45 are under consideration.

Claims 1-11, 35-40 and 44 are finally rejected.

Claim 45 is objected to.

Rejections under 35 USC 103(a)

Claims 1-11, 35-40 and 44 are rejected under 35 USC 103(a) as obvious over Seltzer, et al., U.S. Pat. No. 5,051,511 (Seltzer '511) in view of Rogers, et al., U.S. Pat. No. 5,459,222 (Rogers '222).

The claims under consideration are again rejected as obvious over the cited references for reasons of record. The Examiner further has considered the Declaration of Mr. David Vidal, but does not find it convincing.

Applicants again respectfully disagree and traverse the rejections. Applicants reiterate their arguments of record and further state that the Vidal Declaration and supporting documents have not been properly considered. Applicants submit that the arguments of record and the Vidal Declaration, each separately, are satisfactory towards overcoming the present rejections.

Applicants have previously argued that polyurethane and polyester coatings are unknown as paper coatings and that therefore there is no motivation provided to combine the two references in order to solve the present problem of preventing loss of brightness and resistance to yellowing in pulp or paper. Known paper coatings use natural binders such as starch, soy protein or casein, or synthetic latices made from styrene/butadiene, vinyl acetate, vinyl-acrylic, acrylic or vinyl alcohol polymers.

To support this assertion, Applicants submitted a Declaration under Rule 132 by Mr. David Vidal, an expert in paper coating employed at the Pulp and Paper Research Institute of Canada. In it, Mr. Vidal stated that polyurethane and polyester coatings are unknown as paper coatings. He also cited three references; "The Coating Processes", 1993, pages 15-18; "Pigment Coating and Surface Sizing of Paper", 2000, page 799; and "Handbook for Pulp and Paper Technologists", Second Ed., 1997, page 288 as evidence to support his statement. These references were submitted along with the Vidal Declaration.

The Examiner countered by pointing out that in col. 8, lines 35-38 of Rodgers '222, the statement "For textiles a padding operation can be used and for paper, addition to wet pulp; but here also, surface application by a spraying or a coating process is preferable. It is possible to mix the inventive UV-absorbing polymers with other finishing agents for paper,...". Applicants point out that this statement of Rodgers is moot as a paper expert in 2002 stated that polyurethane and polyester coatings are unknown as paper coatings. Two of the supporting documents to the Declaration also post-date the 1995 Rodgers reference. Therefore, the Vidal Declaration and attached documents bring up to date the state of the art for paper, that is that polyester and polyurethane coatings are unknown for paper.

The present rejections are based on the disclosure in Seltzer '511 that optional stabilizers including N,N-diethylhydroxylamine may be added to for example polyurethane or polyester coating compositions, combined with the Rogers '222 teaching that polyurethane or polyester coating compositions including benzotriazole UVA's can be used to coat paper and textiles.

Since polyurethane or polyester coatings are unknown as paper coatings, and were unknown at the time of filing of the present application, there is nothing today or at the time of filing to motivate one skilled in the art to combine the Seltzer '511 and Rogers '222 references regarding paper coatings. As the Examiner states, the references are combined due to their overlap regarding polyurethane and polyester coatings.

Further, Seltzer '511 is aimed at thermoset resins such as the coating resins exemplified in working Examples 12-14 therein (automotive coatings). There is no mention therein towards the coating of paper.

In light of the above, Applicants submit that those skilled in the art would not combine the cited references in order to solve the problem of stabilizing paper.

Further, even with the two cited references in hand, one skilled in the art could not arrive at the present invention. The stabilizers that are the focus of the cited references are hindered amines and ultraviolet light absorbers (UVA's). The stabilizers of the present invention are hydroxylamine and hydroxylamine salts. Seltzer '511 only very generically mentions the possible co-use of hydroxylamine stabilizers among a long list of other potential stabilizers. Seltzer '511 also only generically mentions polyesters and polyurethanes among a whole host of polymer substrates.

Very judicious picking and choosing and/or an inordinate amount of testing would be required in order to arrive at the present invention from the combined disclosures of the cited references, that is a stabilized composition comprising pulp or paper and an effective amount of certain hydroxylamines or their salts. An assertion that the present invention is obvious from the combination of cited references is hindsight analysis.

Further, the Rogers '222 reference does not teach the use of Cibafast® W, the sodium salt of 3-(2H-benzotriazol-2-yl)-4-hydroxy-5-sec-butylbenzene sulfonic acid, but rather teaches that it is an ineffective stabilizer relative to the inventive stabilizers therein. In Example 21 of Rogers '222, cited by the Examiner, Cibafast® W is shown to be ineffective relative to a polymer-bound benzotriazole UVA. The Rogers '222 reference then teaches away from the present invention of a stabilized composition that further comprises Cibafast® W.

In light of the above discussion, Applicants assert that one skilled in the art would not combine the cited references in order to solve the problem of formulating paper or pulp compositions stabilized against the loss of brightness and having resistance to yellowing and that even with the combination of cited references in hand one skilled in the art would not be able to arrive at the present invention.


Further, the skilled artisan could not choose specific stabilizers, a specific class of stabilizers, or a combination of specific stabilizers that are only very generically disclosed in the cited references with any expectation of success towards preventing brightness loss and yellowing in paper or pulp.

In view of the above discussion and the Vidal Declaration, Applicants aver that the present rejections of claims 1-11, 35-40 and 44 under 35 USC 103(a) are addressed and are overcome.

Applicants respectfully request the Examiner to reconsider and to withdraw the rejections.

Applicants submit that the present claims are in condition for allowance and respectfully request that they be found allowable.

Respectfully submitted,



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May 6, 2002